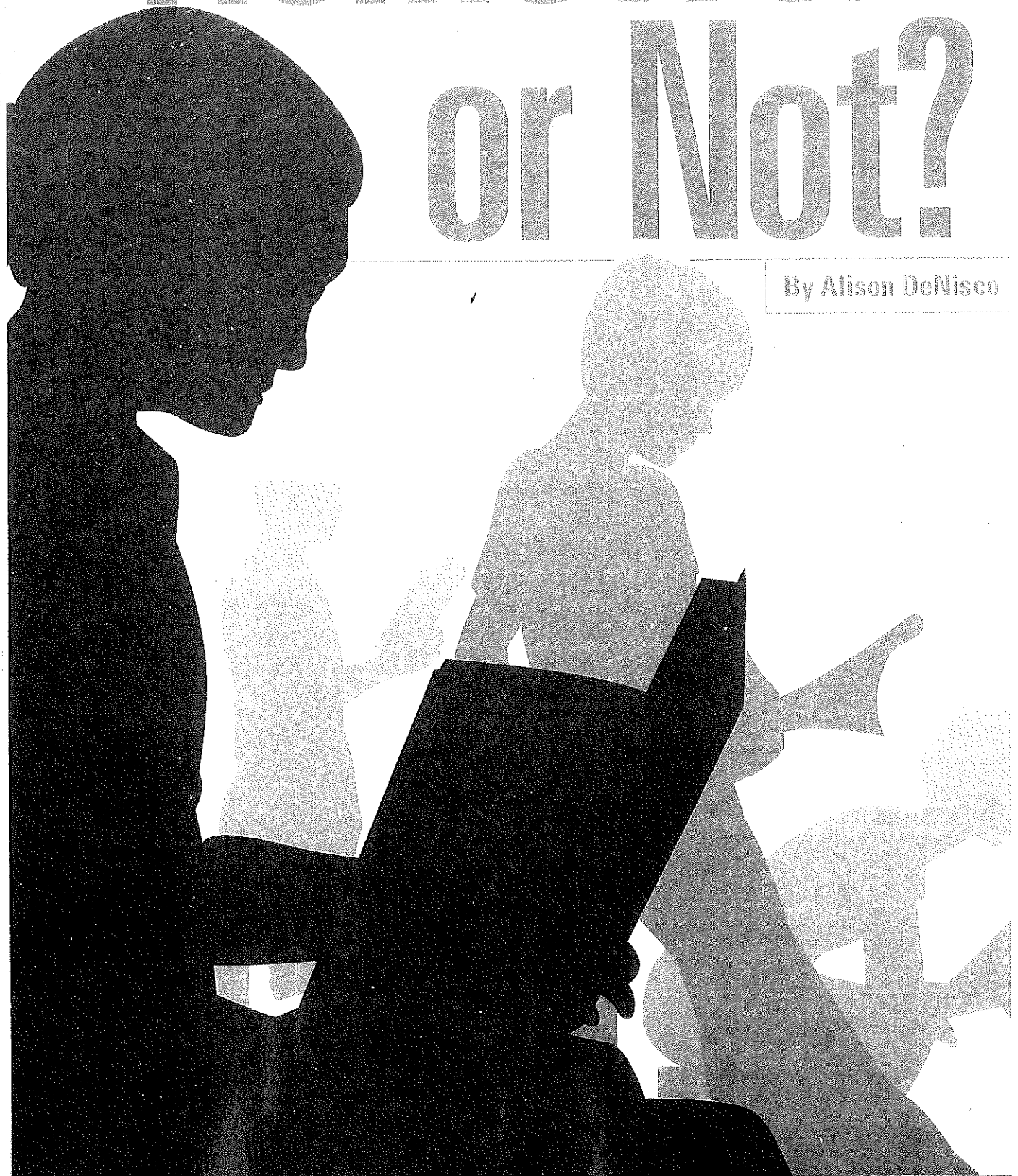


Homework or Not?

By Alison DeNisco



That is the (Research) Question.

Weighing the conflicting evidence

Woe unto the administrator who ventures forth into the homework wars.

Scale it back, and parents will be at your door complaining about a lack of academic rigor. Dial it up, and you'll get an earful from other parents about interference with after-school activities and family time.

If you're looking to bolster your particular position with research results, you're in luck, because there are studies that back the more-is-better approach and others that support the less-is-better tack.

"Homework has been a hot topic for a number of years now because it affects so many people," says Robert H. Tai, a professor at the University of Virginia's Curry School of Education who has researched the topic and conducted a 2012 study, "When Is Homework Worth the Time?" After studying transcripts and data for more than 18,000 sophomore students nationwide, he found no significant relationship between time spent on homework and grades, but did find a positive relationship between homework and performance on standardized tests. "Homework should act as a place where students practice the skills they've learned in class," Tai says. "It shouldn't be a situation where students spend many hours every night poring over something [new]."

In Favor of Homework

A 2004 national survey conducted by the University of Michigan found that the amount of time spent on

homework had risen 51 percent since 1981. Most of this increase was found among younger students, with daily homework for 6- to 8-year-olds increasing, on average, from about 8 minutes in 1981 to 22 minutes in 2003.

There is a positive relationship between the amount of homework students do and their achievement outcomes, according to a 2006 study by Harris Cooper, director of Duke University's Program in Education, which analyzed and combined the results of dozens of homework studies. The studies found that students who had homework performed better on class tests compared to those who did not. Twelve studies linking the amount of homework to achievement and controlling for other factors, such as socioeconomic status, also found a positive link. Of 35 studies that simply correlated homework and achievement, with no attempt to control for student differences, about 77 percent also found a positive link between time on homework and achievement.

However, says Cooper, there was one group in the study for which homework was not correlated with achievement: elementary school students. For these children, the report states that "the average correlation between time spent on homework and achievement ... hovered around zero," or no relationship. This may be because younger students have less-developed study habits and are less able to tune out distractions at home, Cooper says.

The Case for Less

Other research has yielded other interpretations about the usefulness of homework. The authors of "Reforming Homework: Practices, Learning and Policies" (Palgrave Macmillan, 2012) evaluated homework research and concluded that it does not significantly impact achievement—and can even be detrimental. One study from Penn State that analyzed data from the late 1990s found that, in countries with high homework demands, student performance on the international test of achievement known as



Homework or Not?

Trends in Mathematics and Science Study was poorer than those with less rigorous after-school assignments. The authors, both professors at Australian universities, do not call for a homework ban, but they do recommend less homework, as well as homework assignments of a higher quality, rather than large amounts of drill and practice work.

Further, Tai and colleagues' study, "When Is Homework Worth the Time?" also found that sophomores who spent more time on after-school assignments did not fare any better or worse with grades, but did perform better on standardized tests. "Based on our research, it appears that the most effective use of homework may be to help students sharpen their skills with things that they already know how to do, rather than trying to use homework as an extension of class time," Tai says.

Issues often arise when students and parents do not understand the aim of the homework assignments, Tai adds, and it is



A Florida Virtual School student spends part of his day online for school work, at school or home, anywhere there is an internet connection. The term "homework" becomes obsolete.

imperative for teachers to make the purpose clear.

A 2011 study in the *Journal of Advanced Academics* found that it was the sense of self-efficacy students felt

while completing homework assignments, and the availability of resources (such as a quiet place to work and access to a computer) that led to increased mathematics achievement on an international exam.

The Equity Issue

Working around and with the bumpy playing field.

Some say that homework favors more advantaged students who have access to technology at home and, likely, an engaged parent to help them complete assignments.

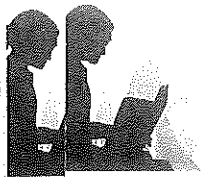
Because of this inequality issue, last fall the French government proposed eliminating homework in elementary and junior high school, arguing that it puts poorer students at a disadvantage. Greg Green, principal of the flipped Clintondale High School in the Clintondale (Mich.) Community School District, agrees, and believes flipped learning provides all students a chance to succeed by doing school work under teacher supervision, and receiving immediate feedback. "It really levels the playing field for kids," Green says. "Not all students have a support mechanism, when practicing and going through work. We want any student who's going through the learning process to be with the expert, and understand things before they leave the facility."

With at-home assignments that increasingly require technology and internet access, districts must consider options for students who may not have such tools at home. At Clinton-

dale, students can use school computers to complete their homework assignments if they lack the resources or a good working environment at home, Green says.

At Florida Virtual School (FLVS), an online K12 public school, students have access to virtual learning labs in both classrooms and libraries as well, according to Michelle Licata, the 2012 FLVS teacher of the year award recipient. FLVS also implemented a Laptop for Learners program, Licata says, which loans laptops to students in need while they complete their courses.

Increasing access to smartphones, on which students can do research or watch videos, across socioeconomic classes in recent years is also helping bridge the gap. "There are still concerns around the digital divide. But if you look at reports, we're seeing that trend on the decline," says Greg Levin, senior vice president of school solutions for K12, Inc. "It's definitely not erased, and there are socioeconomically disadvantaged families who maybe don't have access, but with cell phones, you're seeing that not be as much of an issue."



Homework or Not?

And students who spent more time on homework performed worse on the exam, the researchers found. "Although this was a surprising finding, a lack of understanding of a subject can lead to inefficient and disproportionate effort, as well as diminished motivation," the study states. The researchers add, "This observation fits the notion that students who have low mathematics scores and spend more time on mathematics homework do it precisely because of low self-efficacy and fewer support resources."

International Debate

In 2012, Finland and South Korea came in at numbers 1 and 2, respectively, on the Global Index of Cognitive Skills and Education Attainment, which ranks countries based on international test scores, literacy, and graduation rates (the United States was ranked at number 17). Though their students occupy the top spots globally, these two nations approach homework and learning in radically different ways.

Finland follows a European educational model, characterized by short school days and few homework assignments. South Korea, like many East Asian countries, in contrast, has long school days followed by tutoring sessions and a focus on rote learning assignments. "It is hard to find two education systems more different," says the rankings report "The Learning Curve: Lessons in Country Performance in Education." The report adds, "Closer examination, though, shows that both countries develop high-quality teachers, value accountability and have a moral mission that underlies education efforts."

France, ranked at number 25, is considering a different approach: last fall, the French government proposed doing away with homework in elementary and junior high school altogether, arguing that it puts poorer students and those with difficult home situations at a disadvantage. "Education is priority," French President Francois Hollande said in an October speech at Paris's Sorbonne University. "An education program is, by definition,

Tutoring and Homework

Services adapt to fit 21st-century assignments.

The changing nature of homework and increased use of technology in assignments have affected tutoring companies and the services they provide.

Personalized learning is an increasingly important concept for homework help, says Lynn Fontana, chief academic officer of Sylvan Learning, a national tutoring center chain that provides homework help for pre-K12 students. "The degree to which the adaptive technology and computer technology enable us to meet the needs of students as they are clearly defined is really where everybody is going, including in homework help," she adds.

For example, with SmartTutor, a K5 online tutoring system, students take an assessment test to determine their strengths and weaknesses, and each child is then placed into a personalized learning program tailored to his or her specific areas of need to better target homework help.

"We go back to where the gap happened, and assign lessons very specifically to that individual student that will bridge that gap, so they can quickly get up to speed," says Robin Baker, president of SmartTutor.

Parents often struggle trying to help their children taking higher mathematics, such as algebra and geometry, and these are areas where Sylvan sees the greatest demand for homework help. The company continues to look for better, more systematic ways to support students with after-school assignments.

"There's a huge opportunity to do more than just help students do their homework, to help them understand some of the fundamentals that may be interfering with their ability to do the work on their own," she says.

a societal program. Work should be done at school, rather than at home."

Nontraditional Models

Now, the very concept of homework is being disrupted by the advent of the flipped classroom, which involves a teacher's presentation being delivered outside of class, via a video that students view at home, while class time is used for active problem solving by students (which would traditionally be considered 'homework') and one-to-one or small group tutoring with the teacher, says Kari Arfstrom, executive director of the Flipped Learning Network, a national clearinghouse on the method.

Clintondale High School in the Clintondale (Mich.) Community School District uses flipped learning, which helped students make strides in homework. The district has 75 percent of its students receiving free or reduced-price lunch. And three years ago, the school began transi-

tioning to a flipped model to try to engage a struggling student population. "Homework completion rates were around 30 percent, and kids were struggling when we asked them to practice at home," says Principal Greg Green. "We decided to look at reversing it, and doing homework in school."

Today, Clintondale students complete miniature lessons at home, which could involve watching a presentation, reading, or reviewing information, Green says; but most of the work, such as writing essays and performing math problem sets, is done in class. Students will have a half an hour of work per night on average, Green says, often watching two or three videos that are five to seven minutes long each.

The results have been positive: The school's average student failure rate dropped from around 35 percent to under 10 percent since implementing the flipped model, Green says, and state test scores

increased in every subject. Attendance went up about 4 percent, now hovering around 94 percent, and the graduation rate increased from 80 to 90 percent. "It's been quite an evolution here," Green says, in large part because "teachers are there to offer effective feedback and clarify when students may be struggling. Research tells us we should have kids engaged in rigorous content, have access to technology, and give immediate feedback, and this allows us to give it to them."

How Much Is Enough?

According to a parent guide released by the National PTA and the National Education Association, most educators agree that for K2 students, homework is more effective when it does not exceed 10-20 minutes daily; for students in grades 3-6, 30-60 minutes a day is adequate; and in junior and senior high, the amount of homework will vary by subject, with many district policies stating that high

"It's been quite an evolution here."

Greg Green, principal, Clintondale High School,
Clintondale (Mich.) Community School District

school students should expect about 30 minutes of homework per course.

Harris Cooper of Duke University concludes, in an op-ed piece distributed by the Duke University Office of Communications:

—Practice assignments improve scores on class tests at all grade levels

—A little amount of homework may help elementary school students build study habits

—Homework for junior high students

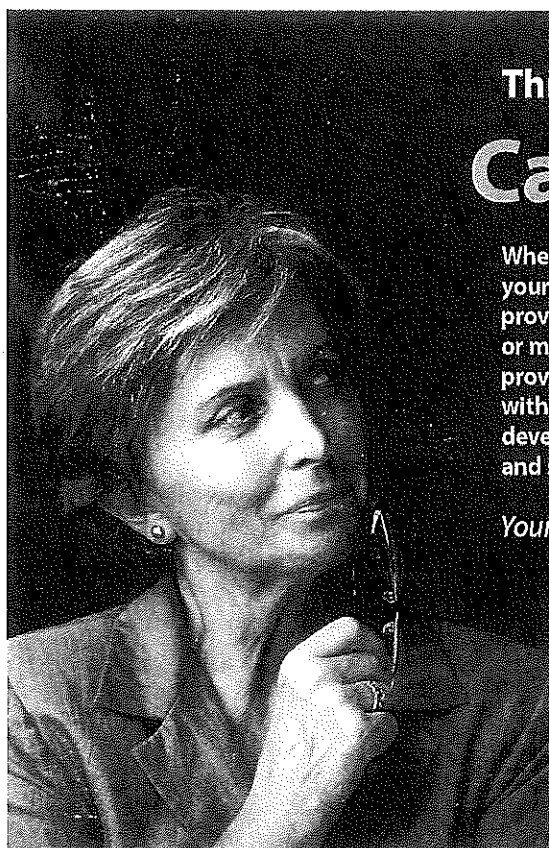
appears to reach the point of diminishing returns after about 90 minutes per night

—For high school students, homework is effective until between 90 minutes and 2-1/2 hours of homework a night, after which returns diminish.

It remains difficult to show causation between increased homework and higher achievement, due to influencing factors such as teacher effectiveness and class participation, researchers say. Most agree that homework should be purposeful, and that more does not translate to better.

"Busy work turns students off from learning," says Lynn Fontana, chief academic officer of Sylvan Learning, a national tutoring chain that provides homework help for pre-K12 students. "If they can see the connection between what they're doing as homework and what they need to know [for class], they are much more willing to do the homework." DA

Alison DeNisco is staff writer.



Thinking about starting a virtual school?


Calvert can help.

When you partner with **Calvert**, you maintain control of: your budget, your program, and your teachers. Calvert provides an economic solution helping you retain 50% or more of your funding compared to other virtual school providers. The Calvert virtual school solution provides you with student recruitment support and professional development for your certified teachers. You will be guided and supported from start-up through implementation.

Your brand. Your funding. Your teachers. Your outcomes.

For our free guide to implementing your own K-8 program,
7 Steps to Starting Your Virtual School
visit our website: explorecalvert.com/da

(877) 599-8703
yourschool@calvertservices.org



CALVERT
PARTNERS